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PTO/SB/08A (10-01)

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/666,671
				Filing Date	9/17/03
				First Named Inventor	Shi
				Art Unit	1765
				Examiner Name	Not Yet Assigned
Sheet	1	of	10	Attorney Docket Number	P118-US

U.S. PATENT DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
LV ↓ TAT	AA	US- 3.511.727	05-12-1970	Hays, R.G.	
	AB	US- 4.190.488	02-26-1980	Winters, H.F.	
	AC	US- 4.310.380	12-12-1982	Flamm et al.	
	AD	US- 4.498.953	02-12-1985	Cook et al.	
	AE	US- 4.695.700	09-22-1987	Provence et al.	
	AF	US- 4.740.410	04-26-1988	Muller et al.	
	AG	US- 4.749.440	06-07-1988	Blackwood et al.	
	AH	US- 4.789.426	12-06-1988	Pipkin, M.A.	
	AI	US- 5.206.471	04-27-1993	Smith, D.K.	
	AJ	US- 5.330.301	07-19-1994	Brancher, C.D.	
	AK	US- 5.439.553	08-08-1995	Grant et al.	
	AL	US- 5.534.107	07-09-1996	Gray et al.	
	AM	US- 5.672.242	09-30-1997	Jen, J.	
	AN	US- 5.716.495	02-10-1998	Butterbaugh et al.	
	AO	US- 5.726.480	03-10-1998	Pister, K.S.	
	AP	US- 5.753.073	05-19-1998	Jen, J.	
	AQ	US- 5.757.456	05-26-1998	Yamazaki et al.	
	AR	US- 5.835.256	11-10-1998	Huibers, A.	
	AS	US- 5.858.065	01-12-1999	Li et al.	
	AT	US- 6.022.456	02-08-2000	Manning	

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Examiner Initials ¹	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁸
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
LV ↓ TAT	BA	EP-0704884-A2	04-03-1996	Mehta, J.		
	BB	EP-0822582-A2	02-04-1998	Bhardwaj, J.K.		
	BC	EP-0822584-A2	04-04-1998	Bhardwaj, J.K.		
	BD	EP-0838839-A2	04-29-1998	Bhardwaj, J.K.		
	BE	EP-0878824-A2	11-18-1998	McQuarrie et al.		
	BF	EP-0878824-A3	01-19-2000	McQuarrie et al.		
	BG	EP-0955668-A2	11-10-1999	Yao et al.		
	BH	WO-98/05605	02-12-1998	Bhardwaj, J.K.		
	BI	WO-98/13856	04-02-1998	Bhardwaj, J.K.		
	BJ	WO-98/32163	07-23-1998	Tai et al.		

Examiner Signature	/Lan Vinh/	Date Considered	05/29/2005
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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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LV ↓ LV	AU	US- 6.051.503	04-18-2000	Bhardwaj, J.K.	
	AV	US- 6.162.367	12-19-2000	Tai et al.	
	AW	US- 6.277.173 B1	08-21-2001	Sadakata et al.	
	AX	US- 6.290.884 B1	09-18-2001	Patel et al.	
	AY	US- 6.328.801 B1	12-11-2001	Gary et al.	
	AZ	US- 6.334.928 B1	03-12-2002	Sekine et al.	
	AA	US- 6.355.181 B1	03-12-2002	McQuarrie, A.D.	
	AA	US- 2001/0002663 A1	06-07-2001	Tai et al.	
	AA	US- 2002/0033229 A1	03-21-2002	Lebouitz et al.	
		US- 2003/0054588	03-20-2003	Patel, et al.	
		US- 2002/0185699	12-12-2002	Reid	
		US- 2002/0121502	09-15-2002	Patel, et al.	
		US- 2002/0047172	04-25-2002	Reid	
		US- 6.436.229	08-20-2002	Tai, et al.	
		US- 2002/0196524	12-26-2002	Huibers, et al.	
		US- 2003/0166342	09-04-2003	Chinn, et al.	
		US- 6.409.876	6-25-2002	McQuarrie, et al.	
		US- 6.396.619	5-28-2002	Huibers, et al.	
		US- 6.576.489	6-10-2003	Leung	

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LV ↓ LV	BK	WO-99/01887	01-14-1999	Lea et al.		
	BL	WO-99/03313	01-21-1999	Lea et al.		
	BM	WO-99/49506	09-30-1999	McQuarrie, A.D.		
	BN	WO-00/52740	08-08-2000	Bhardwaj et al.		
	BO	JP-1982/57098679-A	06-18-1982	Tsunetoshi, A.		
	BP	JP-1983/58130529-A	08-04-1983	Yoshihiro et al.		
	BQ	JP-1985/60057938-A	04-03-1985	Katsumi et al.		
	BR	JP-1986/61053732-A	03-17-1986	Arata et al.		
	BS	JP-1986/61134019-A	06-21-1986	Shinji et al.		
	BT	JP-1986/61181131-A	08-13-1986	Shinji et al.		

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<div style="text-align: center;"> LV ↓ LV </div>					

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LV ↓ LV	BU	JP-1986/61187238-A	08-20-1986	Nobuo et al.		
	BV	JP-1986/61270830-A	12-01-1986	Toru, T.		
	BW	JP-1987/62071217-A	04-01-1987	Toru et al.		
	BX	JP-1988/63155713-A	06-28-1988	Tadashi, F.		
	BY	JP-1989/01208834-A	08-22-1989	Nobuo et al.		
	BZ	JP-1989/10217921-A	08-31-1989	Tsuneo et al.		
	CA	JP-1990/02250323-A	10-08-1990	Susumu et al.		
	CB	JP-1991/03012921-A	01-21-1991	Nobuo et al.		
	CC	JP-1992/04096222-A	03-27-1992	Atsuyuki, A.		
	CD	JP-1995/07029823-A	01-31-1995	Hiroshi, T.		

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				Examiner Name	Not Yet Assigned
				Attorney Docket Number	P118-US
Sheet	4	of	10		

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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
LV	CE	JP-1997/09251981-A	09-22-1997	Kazuaki et al.		
LV	CF	JP-1998/10313128-A	11-24-1998	Hanmin et al.		
LV	CG	JP-1998/10317169-A	12-02-1998	McQuarrie et al.		

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		Filing Date	9/17/03
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		Group Art Unit	1/65
		Examiner Name	Not Yet Assigned
Sheet	5	of	10
		Attorney Docket Number	P118-US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
LV ↓ LV	DA	ALIEV et al., "Development of Si(100) Surface Roughness at the Initial Stage of Etching in F ₂ and XeF ₂ Gases Ellipsometric Study", Surface Science 442 (1999), pp. 206-214.	
	DB	GLIDEMEISTER, J.M., "Xenon Difluoride Etching System" (Nov. 17, 1997).	
	DC	HABUKA et al., "Dominant Overall Chemical Reaction in a Chlorine Trifluoride-Silicon-Nitrogen System at Atmospheric Pressure", Japan Journal of Applied Physics Vol. 38 (1999), pp. 6466-6469.	
	DD	HECHT et al., "A Novel X-ray Photoelectron Spectroscopy Study of the Al/SiO ₂ Interface", J. Appl. Phys. Vol. 57 (June 15, 1985), pp. 5256-5261.	
	DE	HOULE, F.A., "Dynamics of SiF ₄ Desorption During Etching of Silicon by XeF ₂ ", IBM Almaden Research Center (April 15, 1987), pp. 1866-1872.	
	DF	FLAMM et al., "XeF ₂ and F-Atom Reactions with Si: Their Significance for Plasma Etching", Solid State Technol. 26, 117 (1983).	
	DG	IBBOTSON et al., "Plasmaless Dry Etching of Silicon with Fluorine-containing Compounds", J. Appl. Phys. Vol. 56 No. 10 (Nov. 1984), pp. 2939-2942.	
	DH	IBBOTSON et al., "Comparison of XeF ₂ and F-atom Reactions with Si and SiO ₂ ", Applied Physics Letter, Vol. 44, 1129 (1984).	
	DI	STRELLER et al., "Selectivity in Dry Etching of Si (100) and XeF ₂ and VUV Light", Elsevier Science B.V., Applied Surface Science Vol. 106 (1996), pp. 341-346.	
	DJ		
DK			

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LV ↓ LV	DL	WINTERS, H.F., "Etch Products from the Reaction of XeF ₂ with SiO ₂ , SiO ₃ , Si ₃ N ₄ , SiC, and Si in the Presence of Ion Bombardment", J. Vac. Sci. Technol. B 1(4) (Oct/Dec 1983), pp. 927-931.	
	DM	WINTERS et al., "The Etching of Silicon with XeF ₂ Vapor", Appl. Phys. Letter, Vol. 34(1) (January 1, 1979), pp. 70-73.	
	ON	XACTIX, Inc., Marketing Brochure (June 27, 1999).	
	DO	"Xenon Difluoride Isotropic Etch System: Seeing is Believing", Surface Technology Systems Ltd. brochure, Newport, UK (date unknown).	
	DP	Assorted promotional literature, Surface Technology Systems Ltd., Newport, UK (July 28, 1999).	
		Kurt Williams, Etch Rates for Micromachining Processing-Part II, 2003 IEEE, Pgs 761-778, Journal of Microelectromechanical Systems, Vol. 12, No. 6, December 2003.	

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LV	BA	ANDERSON, H.M., "Plasma Diagnostics for Semiconductor Processing", 2000 Digest of the LEOS Topical Meetings (July 24 - 28, 2000), pp. 117-118 (abstract only).	
	BB	BARYSHEV et al., "Monitoring of XeO_2/Si Plasma Etching and End-Point Detection", Mikroelektronika (Russia), Vol. 25, No. 5 (Sept/Oct 1996), pp. 373-379 (abstract only).	
	BC	BASSOM et al., "Modeling and Optimizing XeF_2 -enhanced FIB Milling of Silicon", 25th International Symposium for Testing and Failure Analysis, Santa Clara, CA (Nov. 14 -18, 1999), pp. 255-261 (abstract only).	
	BD	BERG et al., "Real-Time Control of Etching Processes: Experimental Results", Proceedings of the SPIE - The International Society for Optical Engineering, Vol. 3213 (1997), pp. 249-260 (abstract only).	
	BE	CHAMBERS et al., "Endpoint Uniformity Sensing and Analysis in Silicon Dioxide Plasma Etching Using In Situ Mass Spectrometry", J. Vac. Sci. Technol. B, Microelectron. Nanometer Struct., Vol. 16, No. 6 (Nov/Dec 1998), pp. 2996-3002 (abstract only).	
	BF	CHAN et al., "Gas Phase Pulse Etching of Silicon for MEMS with Xenon Difluoride", Engineering Solutions for the Next Millennium: 1999 IEEE Canadian Conference on Electrical and Computer Engineering, Edmonton, Alberta, Vol. 3 (May 9 - 12, 1999), pp. 1637-1642 (abstract only).	
	BG	CHANG et al., "Gas-Phase Silicon Micromachining with Silicon Difluoride", Proceedings of the SPIE - The International Society for Optical Engineering, Vol. 2641 (1995), pp. 117-128 (abstract only).	
	BH	CHEN et al., "Spatially Resolved Endpoint Detector for Plasma Etcher", 1997 IEEE International Symposium on Semiconductor Manufacturing Conference Proceedings, San Francisco, CA (Oct. 6 - 8, 1997), pp. B45 - B48 (abstract only).	
	BI	CHU et al., "Controlled Pulse-Etching with Xenon Difluoride", International Solid State Sensors and Actuators Conference (Transducers '97), Chicago, IL, Vol. 1 (June 16 - 19, 1997), pp. 665-668 (abstract only).	
	BJ	HEINRICH et al., "Multichannel Process Monitor for Real-Time Film Thickness and Rate Measurements in Dry Etching and Deposition", Vacuum, Vol. 51, No. 4, (Dec. 1998), pp. 497-502 (abstract only).	
	LV	BK	KOHLER et al., "Fabrication of Microlenses by Plasmaless Isotropic Etching Combined with Plastic Moulding", Sens. Actuators A, Phys. (Switzerland), Vol. A53, No. 1-3 (May 1996), pp. 361-363 (abstract only).

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LV ↓ LV	BL	LI et al., "Mass Spectrometric Measurements on Inductively Coupled Fluorocarbon Plasmas: Positive Ions, Radicals and Endpoint Detection", J. Vac. Sci. Technol. A, Vac. Surf. Films, Vol. 17, No. 5 (Sept. 1997), pp. 2438-2446 (abstract only).	
	BM	LIAMONOND et al., "Production Data Based Optimal Etch Time Control Design for a Reactive Ion Etching Process", IEEE Trans. Semicond. Manuf., Vol. 12, No. 1 (Feb. 1999), pp. 139-147 (abstract only).	
	BN	LITVAK, H.E., "End Point Control Via Optical Emission Spectroscopy", J. Vac. Sci. Technol. B, Microelectron. Nanometer Struct., Vol. 14, No. 1 (Jan/Feb 1996), pp. 516-520 (abstract only).	
	BO	LU et al., "Effluent Monitoring with FTIR Spectroscopy for Low Open Area Oxide Etch Endpoint Detection", 8th International Symposium on Semiconductor Silicon, San Diego, CA, Vol. 2 (May 4 - 8, 1998), pp. 1250-1261 (abstract only).	
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Examiner Signature	/Lan Vinh/	Date	05/29/2006
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/666,671	
			Filing Date	9/17/03	
			First Named Inventor	Shi	
			Group Art Unit	1765	
			Examiner Name	Not Yet Assigned	
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LV	BW	SEBEL et al., "Reaction Layer Dynamics in Ion-Assisted Si/XeF ₂ Etching: Temperature Dependence", J. Vac. Sci. Technol. A, Vac. Surf. Films, Vol. 18, No. 6, (Nov. 2000), pp. 2759-2769 (abstract only).	
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<div style="text-align: center;"> <div>LV</div> <div style="font-size: 2em;">↓</div> <div>LV</div> </div>	CH	WARNEKE, et al., "In Situ Characterization of CMOS Post-Process Micromachining", Sens. Actuators A, Phys. (Switzerland), Vol. A89, No. 1-2 (March 20, 2001), pp. 142-151 (abstract only).	
	CI	WELCH et al., "Breaking the 0.5 Percent Exposed Area Etch Endpoint Barrier", Semicond. Int., Vol. 19, No. 8 (July 1996), pp. 269-270, 272, 274, 276 (abstract only).	
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